

# ONE HUNDRED YEARS OF HEALTH: NEW YORK CITY, 1866-1966\*

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THE health of a people is influenced by many factors in the immediate environment and in society at large. The history and influence of any one institution becomes more meaningful if attention is paid to the usually larger forces that have contributed to its success or failure. To evaluate the contributions made by the Board of Health and the Department of Health of the City of New York to the physical well-being of all New Yorkers in the past century, one must be constantly aware of the influences of a host of other factors, including:

- 1) Better standards of living with concomitant improvements in diets, living conditions, and education.
- 2) A great increase in scientific knowledge.
- 3) An enormous growth of the medical establishment, i.e., hospitals, doctors, nurses, other technical personnel, voluntary health and professional agencies, laboratories, the pharmaceutical industry, etc.
- 4) A relative public apathy or concern and varying degrees of social responsibility for the state of health of the people.
- 5) The leadership, concern, and effectiveness of local, state, and federal governmental and political leaders.
- 6) The social climate of the times and the money made available for health activities.

Despite the importance of these factors I believe that without those remarkably viable and creative institutions, the Board of Health and the Department of Health,† the physical well-being of the people they serve would have suffered. Despite the ups and downs of these two

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†Other governmental agencies have made their contributions too but cannot be included here. Notable in recent years has been the Department of Hospitals, the Office of the Medical Examiner, and the Mental Health Board. The presence of so many professional schools and voluntary, civic, and professional groups interested in health has been of great influence, as has, on many occasions, the assistance of the mass media.

agencies—and there have been many—their eternal vigilance and their willingness to change has meant that millions of persons have continued to live more safely in the potentially hazardous environment of this unique city.\*

#### EARLY YEARS (1657-1866)

Concern for the health of all New Yorkers did not begin 100 years ago; it began almost as soon as the Dutch settled here. In 1657 Peter Stuyvesant enacted an ordinance that forbade anyone to throw garbage and refuse into the street. Thus began the fight, still not successful, to clear the city of pollution and to maintain a sanitary environment. Soon thereafter attempts were made to control the spread of infectious disease through quarantine measures. These twin concerns, the state of sanitation, particularly of living quarters, and the control of epidemic disease were to dominate the scene for more than 200 years.

Epidemics of cholera and yellow fever struck suddenly, affected the whole population, and threatened the economic life of the city. These facts probably made control of specific diseases easier than creating and maintaining a clean environment.

The struggle to cope with both of these problems was related to what George Rosen has called the epidemiological conundrum, i.e., miasma versus contagion as the explanation of the origin and spread of infectious disease. Reformers held to the first theory to justify their endeavors at sanitary improvements. Some health workers, influenced by William Budd and John Snow in England, held to their strict contagionist point of view. Others, such as John Simon and Max von Pettenkoffer, held to a third position: they admitted that infectious diseases were due to contagia, but held that these factors acted in conjunction with other elements, such as pollution of the atmosphere or soil, or even social factors. The battle raged and New Yorkers benefited, for gains were made on both points.

Some developments in these early years set patterns for the future. In 1796, for example, physicians were required to report infectious diseases; this initiated an early partnership of public and private effort which is still characteristic of the attacks on health problems made by the Department of Health. In the same year the state legislature em-

\*This account gives inadequate attention to the improvement of milk and water supplies, in which the city, state, and federal governments have collaborated, and to which the Board of Health and the Department of Health have made important contributions.

powered the Common Council, then the chief institution of municipal government, to make its own sanitary ordinances; in 1805 it authorized the creation of a local board of health. Thus major control of local health affairs began to shift from the state to the city.

For the next 60 years the public management of health affairs was essentially unchanged. Various officials were added; the composition of the board was changed; work was divided and redivided among several offices; "health wardens" were appointed to inspect houses, lots, and noxious trades. The city inspector developed schemes for collecting and compiling vital statistics. The commissioners of health prevented the importation of disease as well as they could, and they were often called on to provide care for the sick poor. During epidemics, with the help of various eminent practicing physicians the board became very active; it mobilized medical talent, established hospitals, and enacted new regulations. But essentially, between epidemics there was no organization to carry on a vigorous health program. The social climate of the time did not demand or support it.

Members of the Board of Health for much of this period were also members of the Common Council, a body elected for purposes other than to protect the health of the citizenry. They gave major attention to other affairs and were often beholden to powerful interests, many of whose activities were sometimes detrimental to the public health. Year after year attention was called to unsanitary conditions, bad housing, noxious trades, contaminated milk, etc., to little avail. The city inspectors and health wardens were sometimes able to report limited successes. The worst nuisances were cleaned up, at least for a time. One bright spot was the continuing and ever better record of vital statistics and the analyses made from them. Out of comparisons made for different areas of the city grew a concept of preventable disease, not just control of epidemic disease.

But conditions were still deplorable; they called for reform, and the time for reform was ripe. The 1840's had brought a social and sanitary awakening in England. Cholera and typhus epidemics and slum conditions that followed industrialization had led to John Howard's studies of hospitals and prisons, Thomas Percival's investigation of fever, and studies of the operation of the Poor Laws. Most important of all was the publication of Sir Edwin Chadwick's *Sanitary Conditions of the Labouring Population of Great Britain* in 1842, which became a bible

for sanitation reformers. Just as New York doctors-to-be in those years went to study in Europe, designers copied the latest fashions in clothes and in furniture; in this way new ideas were imported.

As pressures for reform mounted in New York City, the new health laws of England were studied. A private organization, the New York Association for Improving the Condition of the Poor, later merged with the Charity Organization Society, today called the Community Service Society. Soon a number of influential persons in the city became alarmed. Peter Cooper, the merchant-prince-philanthropist, William Cullen Bryant, poet and editor of the *New York Evening Post*, Stephen Smith, and Norman B. Eaton, a lawyer, took over the task of collecting the facts on sanitary conditions in the tenement house district. Reform was demanded. The New York Academy of Medicine put pressure on the legislature. Smith's appeals to the legislature were in vivid, lurid, and human terms. One legislator cried, "Why, I believe I have got smallpox, for I begin to itch all over," as he heard a description of how wholesale dealers sold clothing manufactured in homes where the clothes had covered the beds of children with smallpox and remembered that he had just bought a suit from one of these dealers.

The reformers were helped by the threat of a new epidemic of cholera. Finally, they overcame the long-standing opposition of a corrupt alliance of Tammany Democrats and upstate Republicans, whose legislation had failed to handle effectively the growing threats to the health of the people in the city. A new administrative structure was set up by the state legislature in 1866 as part of an effort to achieve reform in all phases of municipal government.

#### A NEW ORGANIZATION GETS UNDER WAY

Thus the Metropolitan Sanitary District and the Board of Health came into being. They covered about the same areas as the city does today. The city had a million inhabitants. The new Board of Health received authority over all matters related to the health of the people, and authority so far essentially unchallenged by legislative or judicial act. For a few years members of the board were appointed by the state to circumvent the then corrupt Tammany organization, but were later appointed by the mayor. There was a Sanitary Bureau, headed by a physician, and a Bureau of Vital Statistics. Most of the sanitation inspectors were doctors. There was an engineer and a legal staff.

The new organization handled the next cholera epidemic (1866) with unprecedented success. This made possible a vigorous sanitary campaign in which many long-sought improvements were made. A chemical laboratory directed by Charles F. Chandler, professor of chemistry at Columbia University, examined water, milk, and food supplies. The results of these scientific analyses became the basis for administrative action. The reporting of diseases by physicians was extended to include cholera, typhus, typhoid, smallpox, scarlet fever, diphtheria, and measles. Each case was investigated and, when necessary, hospitalized. Disinfection was emphasized as a means of control.

The Board of Health initiated inquiries into a variety of health hazards: ventilation, heating, and overcrowding in public schools, conditions in foundling asylums and nurseries, venereal disease and prostitution, the condition of meat and cosmetics, explosions of kerosene lamps, safety measures along the waterfront, etc. Administrative and legislative actions were taken. Elisha Harris, the new registrar, advocated widespread health education, but the time was not yet ripe for acceptance of this revolutionary idea of teaching people about their own health.

It is significant that progress came in those years not through new laws but through the attempts "being made to execute existing law," as the attorney for the new board emphasized. In four years the board showed what could be done by able and determined men freed from the domination of corrupt politicians. In 1870 the Department of Health was put back under the control of the city and of "Boss" William M. Tweed, but the administrative pattern was set. Professionally competent physicians and other specially qualified persons had established an organization that self-seeking politicians feared to eradicate. The day-to-day work was carried on by those whose real values were their professional pride and the service they could render to the people. Since 1870 the tradition of noninterference by political leaders in health affairs has seldom been ignored.

#### TWENTY YEARS OF SLOW GROWTH: HOSPITALS AND HEALTH IN ONE DEPARTMENT

After the first spurt of activity following the establishment of the new board and department, the next 20 years were filled with a variety of activities, including the development of the first sanitary code; greater accuracy in reporting births and causes of deaths; regulation of the

practice of medicine and surgery (1874); an attack on the excessive deaths of infants through a "summer corps" of doctors who visited tenements to care for the sick and to teach prevention; the establishment of a laboratory to make smallpox vaccine and to sell the surplus; the distribution of pamphlets, particularly on control of contagious disease and on the care of infants; the surveillance of rabid dogs; and inspection and provision of some medical care for children in schools and in children's institutions. Great emphasis was put on conditions in tenement housing, general sanitation in the streets, and regulation of noxious trades. The use of the worst cellars for living quarters was eliminated, and plumbing in new buildings had to meet new specifications of the Department of Health.

Control of city-operated hospitals was transferred to the new department. There is little evidence of effort to integrate the work of the rest of the health department with that of the hospitals, except in infectious diseases. But this problem of relating the care of the sick, the inpatient, to ambulatory care or the prevention of disease and disability is still to be solved.

Progress was slow. A sufficient staff was never provided; a clear scientific basis for action was often missing; the poor, who suffered the most, had no machinery through which they could make their needs known; and improvements necessary to clean up the mess in housing too often cut profits.

#### THE BACTERIOLOGICAL ERA

The next great forward thrust in health affairs in New York City came in the 1890's with the leadership of Herman M. Biggs and the widespread application of the new discoveries in bacteriology and immunology. Dr. Biggs, a man of unusual intellect and great charm, was a practicing physician who first became a consulting pathologist to the Department of Health in 1888. He was well acquainted with the scientific work of Koch, Pasteur, and others in European laboratories, work which had opened up new ways of treating and controlling infectious disease. The American scene had been dominated by those who thought dirt per se caused disease and so emphasized sanitation. Now a specific way to prevent disease was opened.

A first step was taken in 1892 after an outbreak of cholera in Hamburg, Germany. These were the years of immigration; the first infected

ship arrived on August 31 of that year. Physicians began to report cases. The department had long sought funds for a bacteriological laboratory. Under pressure of the threatened epidemic, funds were finally provided, within 10 days of a renewed request, and Biggs became its first chief. It was not the first municipal laboratory in the world, but it was the first to be used for the routine diagnosis of disease, a service available to all physicians. As such, it set a precedent for other governments to follow.

In May 1893, Biggs brought William Hallock Park to the laboratory. Dr. Park's studies on diphtheria were well known, but the results had to be more widely applied if the disease were to be controlled. Within eight months doctors for the first time were able to make accurate diagnoses. The next summer Biggs went on one of his almost annual trips to Europe for a vacation and to observe medical developments there. This time it was to find out how effective was the newly announced diphtheria antitoxin. It was good enough for him to cable Dr. Park to begin the inoculation of horses that were already waiting. And with the help of funds raised by a local newspaper antitoxin was soon supplied to Willard Parker Hospital, the contagious disease hospital, and to private physicians. Here another step important to the rest of the country was established: the idea of making therapeutic sera available at a reasonable cost or providing them free to the poor. Years later E. J. Lederle, a retired commissioner of health, was to start the commercial manufacture of biological products in his own company. This paved the way for departments of health to withdraw from producing these items and also led to a vast new development in the pharmaceutical industry.

Bacteriological and chemical examinations and sanitary investigations in the field were soon combined. The famous Croton water supply was shown to be polluted. The reformers now had a firm scientific base for obtaining legislation to abate nuisance in watersheds. By 1911 chlorination of water supplies was initiated after a fight between the water and health departments; this anticipated the fluoridation battle of later years. Pasteurization of milk came in 1912. The laboratory proved essential in both cases.

The laboratory was important not only as a manufacturing and diagnostic center but as a research center; for years it was one of the few truly medical research centers in the country. This was before medical research was a part of medical-school and hospital activities, and before the Rockefeller Institute or any similar research institute had any impact.

In later years the public health laboratory added the control of private laboratories and, as new tests became available, it helped in diagnosing disease. Manufacture of all but very rare diagnostic sera was given up by 1955, for commercial laboratories could now carry the load.

TUBERCULOSIS IS ATTACKED:  
CONTINUING CARE OF PATIENTS BEGUN

"The most common and fatal disease which prevails in New York is both communicable and preventable," said Biggs to the Board of Health in 1893. Biggs was talking about tuberculosis, which caused more than 6,000 deaths a year and did not disappear from the list of the 10 leading causes of death until 1959. Collection and destruction of sputum, disinfection of eating utensils and clothing, the avoidance of excessive contact with cases, and rigid governmental inspection of meat and milk were instituted. Within 10 years Biggs had added much more to the department's antituberculosis activities: medical inspectors who visited homes of patients to instruct families and to consult with physicians; free bacteriological diagnosis; hospitalization of patients and registry of cases; and, finally, over the opposition of the profession, compulsory reporting of cases by private physicians. A decade later ambulatory clinics for diagnosis and treatment were established in all boroughs and tuberculin testing was established. In later years, as evidence indicated their value, treatment by new drugs, BCG vaccination, and rehabilitation measures were added. Bit by bit, complete care for patients with long-term illnesses was provided. The city still spends about 40 million dollars on the control of tuberculosis, which has been a major activity of the department for decades.

TWO MORE "FIRSTS" IN PUBLIC HEALTH: NURSING IN THE HOME  
AND HEALTH SERVICES FOR MOTHERS AND CHILDREN

Two important developments took place shortly after the turn of the century: increased attention to children and the employment of the world's first public-health nurse, Lina Rogers. Another wave of reform had begun. This was the time of Theodore Roosevelt and of trust busting, women's suffrage, pure food and drug laws, workmen's compensation, and the establishment of settlement houses and child-labor laws. "Somehow," as William Allen White put it, "there came a realization that society must give the underdog a better kennel." But rich and poor



babies died alike. Year after year in New York each summer the iron-tired funeral carts clattered through the streets bearing their small white caskets. Flies lit everywhere on uncovered foods, and the quality of milk was as poor in Gramercy Park as in Essex Street. One summer an experiment showed that 30 public-health nurses could teach immigrant mothers of newborn babies that there were new hygienic ways of caring for them: breast or boiled milk, clean hands, isolation from sick babies, etc. In one tenement area, where the nurses visited, 1,200 babies who should have been dead, if the usual statistics held, were still alive at the end of the summer.

Faced with these facts, the city fathers in 1908 created the first municipal unit in the world devoted to the health protection of mothers and children. Headed by another dynamic and articulate practicing physician, Josephine Baker, it absorbed the previous medical, nursing, and educational activities in this field and expanded rapidly. Infant and maternal death rates decreased; dental services for children began; medical care, including tonsillectomies, were provided; school health procedures were revised; midwifery improved; institutions that provided day care and other services for children were inspected; and girls and boys of school age were taught child care to help their immigrant mothers learn to cope with problems in the city. Children in these years bounced their balls to the tune of a well-known ditty:

Marguerite, go wash your feet

The Board of Health's across the street.

Other cities and states formed similar bureaus of maternal and child health. Four years later, the federal Children's Bureau was established by an act of Congress.

#### THE VALUE OF HEALTH EDUCATION AND OF REGIONALIZATION RECOGNIZED

Another milestone in these years was the creation in 1916 of the Bureau of Health Education as the first such unit in the world that was affiliated with a public-health department. Under the guidance of Charles Bolduan, its many activities were widely copied. In the same year, Haven Emerson instituted the requirement of full-time service for all department officials. His reactivated Sanitary Bureau also removed from the streets 14,956 dead horses, 2,105 steers, and sundry mules, deer, monkeys, and camels—not to mention 50,000 dogs and cats! Plans for

regionalization of health services in the city were begun. All maternity care was surveyed. But Emerson's bold ideas, worked out so imaginatively with Dr. Goldwater, died aborning.

#### WORLD WAR I AND A SLUMP

World War I brought a lull in municipal health affairs. Partisan politics had reentered the department with a new mayor. The whole era was one of social reaction, conformity, repression, and a low ebb of interest in social and human welfare. Plans for decentralizing health services and for bringing them closer to the people were dropped. Branch offices with tuberculosis clinics were closed. Publicity for the control of venereal disease ceased. And a clinic designed to test the values of periodic health examinations was short-lived. There was little innovation. But with federal funds 12 prenatal clinics were established, apparently the only lasting contribution of these years.

#### RENEWED ACTIVITIES AND NEW LEADERS: FORMATION OF A DEPARTMENT OF HOSPITALS

With another change in administration and the appointment in 1926 of Louis A. Harris, a new commissioner, things began to hum again. Corruption in the inspection services of milk and food was liquidated. This was to be the last time any important charge of corruption in the Department of Health service was substantiated. A new staff was recruited. Modern x-ray equipment was put into refurbished tuberculosis clinics. Cooperation with private physicians and other groups was sought once again. Shirley Wynn, another commissioner, initiated a large city-wide campaign for immunization against diphtheria led by Thomas W. Lamont, the prominent financier. An independent and strong Bureau of Nursing was established in 1928.

In the same year the Department of Hospitals was formed; this brought together those hospitals operated by the Department of Health, the Bellevue complex, and the city "charity" groups. The new agency was without an advisory or regulatory board until 1950. The importance of closer collaboration with other health-care agencies, of preventing the further fragmentation of medical care, was not seen until much later. Prevention and cure of disease were more or less independent activities. Only a few professional public-health experts were interested in medical care. City officials listened to the pleas of separate vested interests;

boards and departments to handle these interests began to proliferate.

City contributions to voluntary hospitals continued outside the jurisdiction of the new department; such contributions have yet to be subjected routinely to critical professional appraisal.

With the stock-market crash of 1929 and the revelation of corruption in the regime of Mayor James J. Walker, the department suffered; it revived again with the election of Fiorello H. LaGuardia in 1932. Mayor LaGuardia's genuine interest in people and their welfare and his close connections with George Baehr, his personal physician, and with that remarkable scientist and physician, Thomas Rivers of the Rockefeller Institute, both members of the Board of Health, made a rare combination. The spirit of the times encouraged change. Franklin D. Roosevelt's New Deal responded to the desperate needs of the people: needs that resulted from the country's economic collapse. The Social Security Act of 1935 and revisions of the Public Health Act made funds available for specific types of local health work. Surgeon General Thomas Parran, Jr., led new nationwide crusades, notably for the control of venereal diseases, and established the National Institutes of Health, which strengthened the nation's efforts in health research. He noted that "people in general are beginning to take it for granted that an equal opportunity for health is a basic American right." This utterance marked another step—granted, a long one—in wiping out the double standard for medical care—one for the rich and one for the poor—but the direction was clear.

#### NEIGHBORHOOD HEALTH CENTERS AND PROBLEMS OF DECENTRALIZATION

The idea of bringing health services closer to the people through neighborhood centers received much attention again. An experimental health district had been set up in the lower East Side as early as 1914. Strong, centralized, and specialized control had been replaced by a system of local administration under one district chief but, by 1918, the plan had been dropped. The idea, however, was kept alive in part by privately financed agencies, particularly the Milbank Memorial Fund and the Red Cross, at the Judson, East Harlem, Mulberry, and Bellevue Yorkville health centers. In 1929 the Department of Health appointed the Committee on Neighborhood Health Development, composed of citizens and professionals, to formulate plans for providing the entire city with neighborhood health centers. A master plan was adopted in

1930. Seven permanent buildings were completed in seven years; by 1960, when the over-all plan was modified, 22 more health centers and six smaller ones had been completed and staffed.

The city's plan for neighborhood or district health centers was based on census tracts, natural cultural boundaries, local needs, and transportation facilities; each area had a population of about 200,000. For 30 years these units were centers of departmental interest and concern. Here were housed voluntary health agencies, health educators, public-health nurses, case-finding in chronic-disease control, and certain health services for the rich and the poor. The success of these centers is hard to measure. The caliber of the health officer and the length of his tenure in the same area made a difference. The lines between preventive and curative medicine, between public and private effort, between hospital and out-of-hospital care, between welfare and other medical care were still sharply drawn in those years, so that continuing and comprehensive care for families was not achieved. Lack of money curtailed services. Moreover, the continuing contentious, all-or-none arguments about centralization versus decentralization took too much energy. Criteria of what should or could be decentralized and what should or could not were lacking. Not until the mid-1950's was an apparently reasonable truce established. But despite many criticisms the district health centers served millions of New Yorkers and set the stage for today's more vigorous efforts to help the poor. It is seldom recognized that these centers have maintained over the years the world's largest outpatient department. Through them and through the efforts of private physicians, the city's remarkably successful control of tuberculosis, venereal disease, poliomyelitis, diphtheria, smallpox, and now pertussis and measles, has been achieved. Here one third of the infants born each year have received pediatric care and have been helped with problems of behavior and development. Some centers developed extensive aftercare for patients discharged from mental hospitals. Others set up services for the cerebral-palsied child, combined well- and sick-baby care, and have been sources of many other creative health demonstrations.

#### MORE ACTIVITY UNDER LaGUARDIA

But let us go back to the first years of the LaGuardia regime. The findings of an exhaustive appraisal of the department made by the

American Public Health Association and John L. Rice, of New Haven, the new commissioner of health, started another era in the department. Federal funds became available via the state to expand certain health activities. Full-time professionally qualified leaders were put in charge of bureaus and districts; incompetents were retired or put where they could do no harm. Emphasis was on quality and efficiency. In-service training was built up through courses and demonstration-teaching centers; old-time employees were sent to universities; about 1,800 employees were reached in two and one half years in the course of the largest educational effort ever made by the department.

The tuberculosis services were modernized; a more vigorous campaign against venereal disease was begun. The maternal mortality study of the early 1930's, done jointly with The New York Academy of Medicine, showed that two thirds of maternal deaths were preventable. A professional advisory committee, the first of many, was formed to advise the commissioners of health and hospitals exactly what to do. By the mid-1940's the death rate had been reduced by the two thirds that the 1930's study had suggested was possible.

Thomas Duffield, a dynamic registrar of records, followed in the footsteps of his predecessors, the city investigators, and developed a supplementary medical report that was attached to birth and death certificates. The report was treated as confidential, and its tables of statistics have given scientists new and valuable tools which have added greatly to the knowledge of the true prevalence of certain diseases, the complications of pregnancy, and the causes of infant death. The term "fetal death," now adopted by the World Health Organization, was first used by the Department of Health in 1939. Trained statisticians began to watch routine departmental activities.

But the greatest contribution of the 1930's and early 1940's was probably the recruitment of a relatively large number of extremely well-qualified physicians on whom the department was to depend for many years. During the depression, public service appealed to more socially-minded professionals who found work in the department challenging and attractive. There was so much to do.

The first qualified pediatricians were put in charge of the services for mothers, infants, and school children. Scientific studies were made of how best to operate these services. The Astoria School Health Study, for example, set up a new system for the protection of school children,

and it was widely copied throughout the country. The annual routine examination was replaced by a more careful one given every four years. When possible, the examination made by the child's own physician was used in school. Efforts were made to get parents to take the child to his own physician or to find some other medical care for him. But the most important advance was made by helping teachers to observe the child's condition on a day-to-day basis. This information was used as a guide to select those children who should see a doctor or a nurse. The new plan solved some of the problems of the time. Emphasis was put on the more urgent health problems of the children. Better use was made of staff, but the basic problem of what to do with the school health services was not solved. Mental health, so-called child guidance, was already a separate service. Medical care was fragmented. Health education stood apart. And so the situation still is—and not only in New York City, where services still are probably better than in many cities. But how to handle effectively the health problems of all school-age children is a major problem yet to be solved.

Change came too in the supervision of well babies in those latter days of 1930. Pediatricians were hired to supervise the services. A so-called research and training center was inaugurated at the department's Kip's Bay Health Center. Here doctors and nurses studied the problem of what could be done to improve services. Leading pediatricians, child psychiatrists, and nutritionists conferred on new developments in pediatrics, on what psychiatry had to bring to the care of the newborn child and his family, on treatment of minor illnesses, on nutritious low-cost diets, and on the behavior problems so troublesome to parents. A baby book was written and distributed with birth certificates. Pamphlets on feeding and on common behavior problems were developed with the help of mothers and were widely copied. Here Benjamin Spock taught and gathered material for his now famous "Baby Book": *Baby and Child Care*. Since World War II, the center's expanded work in mental health, known as the Attitude Study Project, has been recognized nationally and internationally. The World Health Organization uses its material.

#### COMPLETE MEDICAL CARE FOR SOME

The care of premature babies was an early chapter in the development of the comprehensive medical care to be so widely advocated in

the mid-1960's. In the late 1930's prematurity had become the leading cause of infant mortality. A professional advisory committee made up of leading pediatricians, nurses, and departmental leaders surveyed all existing services. It recommended what needed to be done. Its advice was followed. "Premature centers" were developed. These were staffed with specially trained nurses and were equipped with incubators, oxygen, and blood, and were able to give all the care that a baby might need. Such centers taught the mothers how to care for their babies before the mothers were sent home; nurses made house visits before and after babies went home to see that mothers and homes were ready for the babies and that all went well. Also created was a special follow-up service in the hospital so that the baby would be seen by those who knew his condition, if he was not cared for by his own doctor. Part of the scheme was an ambulance service, with specially trained nurses that could transport the baby prematurely born at home or in a hospital without proper facilities to a "premature center." All the specialized services needed were established, not overnight, but a step at a time; these have helped to save the lives of thousands of babies, rich and poor alike, for there has been no discrimination. The services have been financed by parents, by the city, and by state and federal funds through the Crippled Children's program. Parents paid what they could, but all were cared for in the same way. More centers were established as needed, but not in every hospital.

This pattern of government as a leader, a catalyzer, a planner (though the word was not widely accepted in health circles at that time) and not an operator, worked well. The Department of Health with the help of experts surveyed the field, identified centers of strength as well as gaps, and exercised the leadership necessary to mobilize resources. Since it did not tell doctors or hospitals what to do, it aroused no cry of government interference. It decided the kind of services it would purchase with tax dollars and helped expand them. "Run your own affairs," the department said, "but this is the only kind of service we will buy." The policy resembled the setting up of specifications for the municipal purchase of soap or automobiles. This practice of setting standards for medical care for which tax funds would be paid has been extended to cover other areas. It could stand wider consideration in these days of expanding government activity in medical affairs.

The revision of the care of crippled children is another chapter in

developing such integrated services of medical care. Families had received financial help to pay for hospital care, braces, etc., from the courts. Parents had to appear in court to petition for such help. Delays were interminable. Outpatient and inpatient care were not coordinated. A child might lie in a hospital bed for months before a brace arrived. He might never see the specialist who was in the hospital. In 1945 the service was transferred to the Department of Health. Again, with the help of federal and state money, a whole new system was inaugurated. Centers that met standards were set up by leaders in various fields, such as cerebral palsy, hearing, orthopedic disability, and were approved for support. All hospitals were encouraged to provide comprehensive service, to give the child what he needed for maximum rehabilitation, but payment from public funds was made only to those centers which met standards. Two new elements came into the planning for these services: the strong voluntary agencies concerned with some of the diseases that led to the crippling, and the parents of those who were afflicted. So the voice of the consumer was beginning to be heard, though more faintly than in the mid-1960's. These services did little to increase the skills of the neighborhood physician or of the poorer hospital from whom many patients sought care.

#### SPECIAL PROBLEMS DURING WORLD WAR II

Another important forerunner of today's medical-care programs was that conducted during World War II under the National Emergency Maternal and Infant Care Program (EMIC) through which the infants and pregnant wives of men serving in the first four classes of the armed services were taken care of during pregnancy and for the first year of the baby's life. The enterprise reached out beyond the specialized hospital or doctor to all facilities in a community. Nearly 53,000 infants and mothers were taken care of in about four years. The average payment for the mother was about \$120 and the average for the baby was \$80. However, there was no maximum on what might be spent. One case cost \$2,000. The important fact was that the patient received whatever was needed medically. Obstetric and pediatric consultants were encouraged. Standards for qualified consultants in all medical specialties were established with the assistance of the advisory committee and the county medical societies. Ten per cent of patients were seen by qualified medical consultants—a much higher percentage



than prevailed generally. Standards were also set up for hospitals that would be approved for the care of EMIC patients. Ninety of the 110 hospitals with maternity services finally received sufficient approval for most pregnant women in the city to benefit from the improved services. Institutes were held for the professional staffs of hospitals in order to help them attain higher standards.

Other problems loomed large during World War II. Only two can be mentioned: venereal disease and day care for children. John Mahoney of the United States Public Health Service, later commissioner of health, discovered that penicillin could cure syphilis in 1943; thus began a new era of control. The city's vigorous "V.D." campaign was essential to the health, not only of New Yorkers, but to the millions who passed through the city in those war years. Retrospect indicates that continued public education about syphilis, a more extensive campaign among homosexuals, and improved cooperation from the private physician with respect to follow-ups might have prevented the subsequent resurgence of the disease; however, newly organized attacks are bringing the disease under better control once again in the mid-1960's.

A whole new era of protection for preschool children was created by the "door-key" children, whose mothers went off to work. A new Day Care Unit in the Department of Health inventoried nurseries and day-care centers and helped them expand and improve the care they gave. New Sanitary Code regulations and standards were soon copied elsewhere. The unit had teams of educators, nurses, pediatricians, social workers, nutritionists, and sanitarians, who worked not only in the centers where children were cared for but with the institutions which trained groups formed by the state, churches, schools, and private organizations.

In 1947 the city reached an all-time peak of 171,174 births; meanwhile it established a new low rate for infant mortality. The rate for maternal mortality dropped too. Midwives began to disappear; their licenses dropped from 193 in 1941 to 19 in 1947. New midwives were not trained; doctors had taken over. Nurse midwives later replaced the older type. New York City today is the only city in the country that licenses and supervises this new kind of midwife. Only two states do the same. With the growing interest in and use of nurse midwives in maternity care, the city is fortunate in that no legal barriers stand in the way of their employment.

### IMMEDIATE POSTWAR YEARS

After LaGuardia, mayors for some years showed little interest in health affairs. Four commissioners of health came and went in seven years. Certain activities were strengthened; the department staff was strong and could carry on, but the pinch of low salaries and shortages in personnel began to be felt. One successful experiment was a forerunner of the wider use of the allied or paramedical professionals so widely heralded in the 1960's. So-called "public health assistants" (a new title), persons with no more than a high-school diploma but with special training, took over much of the work that more extensively trained persons had done previously.

Better diagnostic services, including x ray for patients who were cared for by private physicians but were unable to afford modern diagnostic services were set up in some "diagnostic centers" in the health centers. Physicians would not refer such patients to the larger hospitals because they seldom saw them again. Many of these doctors were not on hospital staffs. As a department report said at that time, "the services will thus occupy a position midway between governmental assumption of responsibility for medical care, on the one hand, and on the other a laissez-faire attitude in the care of the needy." There was an extension as well of the diagnostic testing for chronic disease in the Bureau of Laboratories. The new services were poorly financed, opposed by medical societies, and finally abandoned. But they were needed and they were to return in another guise later.

A bureau of nutrition under the scientific direction of an expert was established in 1949. As early as 1932 a nutritionist had acted as a consultant to doctors and nurses, preparing low-cost diets and providing other services. An extensive radio and TV program was later developed. Much of this work, as with other services, was maintained initially by private funds.

### NEW INTERESTS AND LEADERSHIP

In 1954 Robert Wagner, the new mayor, brought a special knowledge of health affairs to City Hall. In the next 12 years many new experiments were initiated under the guidance of Leona Baumgartner, George James, Ross Kandle, and Paul Densen, experienced public-health leaders who were commissioners or deputies in those years. The staff included gifted and well-trained persons. Much reorganization took

place; salaries were increased; persons with new skills were brought in; in-service training began again. The pressure of problems brought an air of excitement. A time for change had come.

Infectious diseases were largely under control. The limited goals of current public health needed stretching. Chronic diseases had come to the fore; continuing care was accordingly essential. Research knowledge was waiting to be more widely applied. With more scientific knowledge and specialization medical care had become more and more fragmented. The specialist was replacing the general practitioner; even nursing and social work had their specialties. The poor often received miserable care or none. Bureaucratic minutiae accumulated in a welfare department ill-equipped to handle the complicated problems of providing modern medical care; antiquated methods dominated the procedures by which the poor could get care. Health insurance and group practice were proving their value. Machines were taking over personal tasks. Medical costs were mounting. Health care was becoming a big business. The need for change was clear but change would not come quickly. Step by step, however, foundations for major changes were laid, and often were built on sound practices of the past.

#### THE INTERDEPARTMENTAL COUNCIL EXPLORES NEW PATTERNS ..

The Interdepartmental Health Council, composed of commissioners of hospitals, health, and welfare (later of mental health also), had been established in 1952. This council might have become a major force for effective coordination of public and private efforts but it failed to do so. The turnover in hospital commissioners was great in those years; departments were swamped with their own day-to-day problems; hospital and welfare departments lacked the professional personnel to plan or deal with major changes.

The council had little power to make radical alterations. The personalities and differing interests of the several commissioners who came and went affected its operation. The council finally secured an executive secretary. Representatives of other city agencies and voluntary agencies often met with it and with its various subcommittees. They worked on problems of the aged, on rehabilitation, maternal care, hospital-based comprehensive-care clinics in a few neighborhoods, prepaid group practice for selected groups of welfare patients, standards for nursing homes, care of amputees, and other problems. Standard setting was

followed by the development of "approved" services from which the city would purchase care for the indigent. In the early 1960's care for well and for sick infants was successfully combined in some poverty-stricken areas and experiments like the one at the Gouverneur Health Center were under way; these were precursors for the well-publicized neighborhood centers of the programs that were to deal with poverty of the later 1960's.

The staff of the four departments worked jointly on projects. The council worked quietly; it seemed best that way. The stage was obviously being set for change, for more integration of services. One important lever was lacking—money to pay for care. Funds became available with the federal legislation of 1966.

The need for a total reorganization of the so-called system of delivery of personal health services was perceived and discussed in and out of the department, but vested interests, entrenched bureaucracy in and out of government, and lack of funds and of economic incentive to change made major moves unrealistic. Committees and commissions came and went. Each added its bit to the mounting piles of evidence that the unstructured, unplanned, inefficient, overlapping, obsolete facilities, the tradition-bound roles and stances of the health professionals, the confused welter of legal restrictions, the multiple sources of governmental funds and powers of different layers of government made the effective delivery of modern medical care to New York's millions more and more unattainable. The machinery was not built to carry the load. But some things could be done—patchwork perhaps, but each improvement brought some new knowledge of obstacles to be overcome. Sometimes there were major breakthroughs when the old machinery worked—as when a vigorous use of the new vaccine and control of oxygen given to premature babies were to cause the disappearance in record time of poliomyelitis and of retrolental fibroplasia, a major cause of blindness.

Two possibilities of change were repeatedly discussed. One was a merger of the public agencies concerned with health, including their several boards. The other was the formation of a quasi-public-private authority or corporation of some kind with freedom from restrictive civil service and budgetary regulations, with the ability to transfer public funds under strict accountability to voluntary nonprofit health organizations, or even to effect under the new organization one system

of medical care that included both tax-supported and voluntary institutions. The Department of Hospitals did move toward "affiliation agreements," which paid medical schools and other strong teaching hospitals for carrying the responsibility for certain services in city hospitals. But this scheme carried certain problems with it and was comprehensive enough only to strengthen the leadership in certain major services in certain city hospitals.

#### MORE ACTIVITY IN CONTROL OF CHRONIC DISEASES

After the mid-1950's the Department of Health increased its work in the field of chronic disease and medical care. Early case-finding would cut down disability and even prevent death. Why not begin here? Better use of existing resources could provide the means. Why not intensify efforts in this direction?

The first center for the detection and prevention of cancer had been opened in 1947 as a cooperative venture of Cornell Medical College, Memorial Hospital, the New York City Cancer Commission, and the Department of Health. Cancer of the cervix, which caused 400 deaths a year, came first. Epidemiologists knew that this form of cancer was more prevalent among certain groups of women than among others. Devising simple techniques that could be used in mass surveys took much time. The self-operated vaginal-smear technique and more automatic screening of slides were tried, but the technology involved was not sufficiently advanced. Nevertheless mass screening was expanded. Screening for diabetes and glaucoma in special groups with high incidence was also initiated.

There was still too much tuberculosis. Instead of waiting to have the disease reported or relying on checking contacts mobile x-ray units were sent into the areas where tuberculosis rates were high. BCG vaccine was more widely used. Earlier rehabilitation for arthritic and stroke patients was sought in a variety of small experiments and demonstrations.

The relation of diet to coronary artery disease, a major cause of death and disability, was tackled through scientific studies which were to be widely copied later. The possibility of devising a low-cholesterol diet, palatable and easy to procure, was shown. Blood-cholesterol levels came down for those who remained on the diet. The many factors involved in the development of coronary disease are still not clear enough

to be certain that control of diet per se suffices for prevention. An interesting by-product of these activities was collaboration with different segments of the food industry to produce margarines, ice creams, and other foods with a decreased content of highly saturated fats.

However it was obvious that, as a 1960 report said, "Were comprehensive and continuing medical care of a high-quality being received by most New Yorkers, many of these conditions would not be found." Better logistics for the delivery and management of medical care were sought in demonstrations for selected groups; for the most part existing facilities and personnel were used. One such project was carried out in a low-income housing project, another for older people in a housing project in Queens County, still another for all persons in the Gouverneur area in the Lower East Side. These projects brought services closer to the people and clearly led to earlier case finding and continued care. Each program had built into it some kind of evaluation, for it was as important to learn as to do.

Other ventures aimed at improved care for larger groups. The commissioners of welfare and health established a joint position in both departments whereby the expertise of both could be used in an attempt to obtain better medical care for the indigent. A joint venture with the Health Insurance Plan of Greater New York showed that hospitalization could be cut down through continuing care from an organized group. Another experiment, financed by research funds (see below), compared care given by a large teaching hospital, The New York Hospital, with that furnished through the usual fragmented service previously provided through welfare channels.

The problem of providing care for the indigent in proprietary hospitals and nursing homes was surveyed. With the help of physicians, nutritionists, and sanitarians the department developed regulations for these institutions that were later adopted by the Board of Hospitals. Thus, step-by-step, one problem at a time, better management of the health-care system was being effected; the time for major changes had not yet arrived.

#### MENTAL HEALTH

The Department of Health had pursued mental-health activities after the 1930's. The care of the mentally ill was a state function. Pediatricians in the department in the late 1930's saw the importance of

handling the so-called behavior problems in infants and young children and established training and consultation programs for well-child clinics (see above). The Board of Education operated a Bureau of Child Guidance for school-age children. In 1949 the department established three adult psychiatric services in health centers. Follow-up of those who were released from state hospitals was tried. In the mid-1950's the state legislature established local mental-health boards which carried with them state-matching funds, just as public health in the city had long been supported by state reimbursement. The pressure to create an independent organization to handle mental-health affairs was great, and so, at the price of further fragmentation of medical care a new agency, the Community Health Board, was formed under a plan formulated by the state legislature. It has extended services largely through contracts with public and private agencies. Again, the time for integration with other health services was not ripe.

#### NEW ENVIRONMENTAL HAZARDS

Through those years, hazards from the environment were not forgotten. Eternal vigilance was maintained by sanitarians who were watching food, milk, and water supplies, and fighting filth and smoke: their units were always understaffed and were always fighting vested interests of one sort or another. Success was often hard to see. But for years there has been no outbreak of food poisoning or of intestinal disease traced to food or water, other than minor episodes due to the preparation of food at home or by social groups. Clearing major pollution in the waters around the city moved slowly; studies pinpointing important sources proved helpful. Effective handling of this problem requires a major concern about pollution on a tri-state basis and large financial support.

Other man-made hazards were being recognized. Certain deadly hazards were eliminated. Carbon-monoxide poisoning, which had taken hundreds of lives in poor tenements, was finally eliminated with the mandatory replacement of obsolete gas refrigerators and water heaters. Monitoring systems for the measurement of air pollution were set up by laboratory experts in the health department. Major support for air-pollution control came only with the establishment of a new department in 1949.

Accidental poisonings took lives every year, particularly of children.

A Poison Control Center to serve thousands of doctors and patients was set up in 1955. Its information service still works day and night. The center's roster of the composition of antidotes for thousands of compounds is used by New Yorkers and non-New Yorkers.

Realization of the hazards of ionizing radiation grew out of the development of the atom bomb. A radiation-control unit was set up in 1950, but it had insufficient help. In March 1958 the Board of Health, with the help of the nation's chief experts in medicine and industrial radiation, adopted legislation designed to protect the public from unnecessary exposure to radiation. Under the leadership of an expert from the Atomic Energy Commission, the first comprehensive program aimed at protecting the public against radioactive hazards in the country was established. It was soon found that improper installation and use of x-ray equipment in doctors' and dentists' offices offered the greatest dangers. Elimination of these hazards and protection against radiation accidents were the first points of emphasis. The unit was informed about the movement of all radioactive materials through the city.

#### OLD PROBLEMS CONTINUED

The Sanitary Code or, as it was renamed in 1958, the Health Code, is the basic body of law through which health protection for New Yorkers is regulated. Unrevised for 45 years, it had become an indigestible mass of obsolete, conflicting, and modern regulations covering many aspects of health and business affairs. It was not only recodified, but substantively rewritten with the help of the Columbia University legislation-drafting service. After three years of study and negotiation, the new code was adopted in 1958 and has become a model for modern health laws. Many picturesque laws were abandoned, including one that required the commissioner to police the streets at night in search of horses that had died in harness and had been abandoned, "causing a light to be placed at the head and tail" so that accidents could be avoided!

The story of fluoridating the city's water supply was full of ups and downs. The procedure was first recommended after careful studies in 1952; report after report followed. The issue became a political one, even as chlorination had been a half century before. In 1965 the fluorides were in the water. Thirty-five years of dental care provided to the poorest children by the department's large dental service had protected some, but the treated water would do much more.



Family planning—or birth control, as it was called in earlier days—was another controversial subject. In the 1930's the department had an unwritten agreement with the Catholic Church that women referred to clinics would not be pressured or coerced, and that employees would not be required to participate in any activity that would offend their consciences. Some municipal hospitals gave contraceptive service in the late 1950's. In the 1960's the climate changed and more direct action was taken. Soon national leadership and funds came to the rescue and service in family planning was made widely available.

#### RESEARCH AND EVALUATION

Research in the laboratory had been important since the days of Herman M. Biggs, William H. Parks, and Anna Williams. Several departmental units had published important studies in epidemiology, pediatrics, disease control, statistics, and so on. Basic laboratory research was intensified in 1941 by the establishment of the Public Health Research Institute, a semi-independent unit whose staff was free from routine diagnostic work and could concentrate on basic problems in viral, infectious, and metabolic diseases. It was probably the first municipal research institute devoted exclusively to public health but its scope remained limited. Its record has been an enviable one.

Changes in the health and medical scene demanded other approaches in research. The leading causes of death and disability were changing. Man's ever-increasing ability to control and change his physical environment created new risks. New scientific knowledge and technologies were awaiting wider application. It was felt that even as large an organization as the Department of Health, which had more than 5,000 employees and a budget that was nearing 50 million dollars, should examine its own operations and its future development more carefully. Two approaches were chosen: one via the so-called Health Research Council, to focus on problems the department was ill-equipped to handle; the other, through an internal group more closely related to the department's efforts, intended to work on problems the department could handle.

The establishment of the Health Research Council (HRC), begun in 1954 and formalized in 1958, established a unique approach—another first in the history of the department. A survey indicated that New York City was unusual in the multiplicity of its resources and the

magnitude and diversity of its health problems. Its medical-care services were scattered, undermanned, and were failing to keep up with the health problems of the time. Its medical schools and teaching hospitals had difficulty in keeping teachers, high-caliber technicians, and research scientists. Space for needed facilities was inadequate. Yet there was talent here and an enormous medical establishment that was not being used to find answers to the growing problems. A municipally financed effort focusing on some of the most acute problems seemed appropriate. Careful planning went into the development of the new Health Research Council, which was patterned somewhat after the British Medical Research Council but whose scope was widened to include the social sciences, engineering, and any discipline that could possibly throw light on health problems. It does not duplicate other research efforts. Experts from the Medical Research Council in Great Britain, from the National Institutes of Health, from the Rockefeller Institute and the Rockefeller Foundation, from medical schools, and prominent citizens helped design the new council. Its professional activities are placed largely in the hands of a group of scientists and laymen; the government maintains budget allocations and certain veto power over contracts, but it does not assume responsibility for approval of specific research proposals. The council supports research in universities, colleges, medical schools, and city agencies. A goal of one dollar per person per year was established as an initial rough rule-of-thumb guide for financing. From the beginning, the emphasis has been put on assisting the careers of young research scientists, studying the medical and health problems of particular relevance to the city, and aiding scientific education and training. It is already clear that the support given the career-scientist program has strengthened local hospital and teaching institutions by enabling them to maintain stable positions for highly qualified staff members and creating openings for able scientists who are thus attracted to the city. About \$10 million for career scientist awards have been committed by the city. One of three applications has been refused. At the end of 1965, 172 scientists were being supported and at work in many of the city's municipal and voluntary hospitals where their presence has meant better care for patients.

There are also institutional project grants focusing on problems that particularly concern New Yorkers, such as alcoholism and narcotics addiction, the large number of infant deaths, chronic diseases of the

aged, delivery and management of medical care, mental illness, more specific knowledge about the flow of sewage-polluted waters into New York harbors, and the sources of air pollution.

One success achieved by the council has been in the control of narcotics addiction. After World War II addiction to heroin grew alarmingly. The degradation, the crime, and the lack of effective control were scandalous. The council found that there was almost no knowledge about how the drug worked, even in single-celled animals; it sought persons who might be interested. Finally one brilliant investigator, at work on another problem at The Rockefeller University, undertook the task. With the help of a colleague (his wife), the usefulness of methadone was discovered. By the use of this substance hundreds of young persons are staying away from heroin, are back at work, and are no longer a burden to themselves, to society, or to their families.

Federal, private, and city funds are often employed jointly in a project of the Research Council. Obsolete and half-forgotten storage space has been converted into laboratory space, and more than 100 new laboratories are being developed without building a single new structure. These laboratories are scattered from Coney Island to Washington Heights. They have cost the city only 3 million dollars, a paltry sum compared to the cost of housing them in new buildings.

The municipal funds have acted to a considerable extent as "seed" money. For every dollar of tax money the city has put into the HRC nearly five dollars in additional federal or private funds has been received.

The benefits obtained from research come in unexpected ways; their value does not become apparent for many years, but the HRC has already justified its expenditures. Achievements have ranged from a speed-up in immunization against measles to the treatment of many psychotics at day hospitals so that they can continue to live at home with their families.

With the realization that any large organization needed its own office of research, program planning, and development, the department, as stated above, was reorganized in 1955 to include such an entity. The unit receives municipal, federal, and private funds. It has evaluated a variety of departmental programs, including the management of school children with heart disease and of satellite clinics for maternal and child care. It has helped to plan follow-up services for men who

were rejected by the selective service, whereby these New Yorkers could be returned to their community with their health problems under control. It works for and with other city departments. It promotes research on emerging health problems. Little is known about the cost of chronic-disease programs or about the total expenditures of New Yorkers for medical care, but the economic studies underway are obtaining the facts. An entire new chapter in health economics has been opened. This pattern of having internal research and development units has been copied. Clearly research must move out of the biomedical laboratory into the community, particularly into the area of the delivery of health services, if a major problem of our times is to be solved. This demands a new and different commitment on the part of official departments, universities, and research institutions. Government — federal, state, and local—will need to finance these efforts generously, not only to use the nation's resources more effectively but possibly to hold down mounting costs of health care, and above all to improve the health of everyone.

#### THE NEED FOR REAPPRAISAL

Is the present structure of governmental organization in New York City adequate for meeting today's problems? Obviously the delivery of personal health services is badly in need of reorganization. Other city units have not been sufficiently used. For example, the wealth of information in the Medical Examiner's Office has not been subjected to epidemiological scrutiny. Nor have many health problems. Within the decade separate departments of air pollution and mental health have been established, and much of the regulation of health hazards in housing has been transferred to other departments. These regroupings of functions come and go. What is important is that their functions be carried out better under the new plan, where they are often better financed.

One important factor in health affairs for more than half a century has been the development and maintenance of a delicate balance between the powers of state and city governments. When the Metropolitan Board of Health was established 100 years ago, it was perhaps dimly seen that health problems in the already overcrowded urban areas could probably best be solved locally. Wide powers have been vested in the city's Board of Health and its decisions with hardly any exceptions have been upheld by the courts. One exception concerned

the amount of water allowed in that favored New York food, corned beef. The board fought for more meat and less water, but federal standards, the court ruled, took precedence. The board's work seldom makes the news, but its tradition of excellence is unbroken. For many years mayors have appointed to the board only persons eminently well qualified as scientists, doctors, lawyers, health experts, and administrators who have represented no interest other than the welfare of citizens. Similarly, its counterpart, the Public Health Council of the State of New York, has been largely free of vested interests. It has respected the opinion of and stood behind the activities of the city's Board of Health when necessary. The relations between officials in the two departments have usually kept the same delicate balance of mutual respect regardless of the relation between governors and mayors. The positions have been held, particularly after 1913, when Herman M. Biggs left New York City and became the first commissioner of health in the state, by professionally competent persons who keep each other informed of problems and have members of their staffs solve them. New York City, because of its richer facilities and more specialized personnel, could and often did set higher standards than could be set for the rest of the state. This was true even for medical care until the advent of Medicare and Medicaid in 1966. In other words, health has not been a field on which politicians fought their battles. As Mayor LaGuardia said years ago, there is no difference between the tubercle bacillus that attacks a Republican or a Democrat, hence the wise politician has kept partisan politics out of the field of health. The politician has learned that good health services are good politics. This does not mean that the health worker does not have to win wide public support for programs and work effectively with the political leaders in power. The trick is not to become embroiled in the petty partisan political battles but to win wide political support. And that too is a matter of delicate balance.

Another delicate balance is maintained between the department and the board. In 1927 an amendment to the *Charter of the City of New York* (section 1167 of the 1901 charter) provided that the commissioner become head of the department. However, most of the administrative powers remained with the board because of a failure to amend other sections of the charter which specifically authorized the Board of Health to act in an administrative capacity. The new charter of 1938

defined the powers and duties of the commissioner so as to give him all of the powers and duties except those specifically conferred by law on the Board of Health.

The board has wide powers over all matters affecting the health of citizens. It has used its broad powers sparingly and wisely. Since the 1930's the department has brought to the board only matters of major importance and has relied on the board to enact legislation. The power of the Board of Hospitals has changed the situation to a certain extent, so far with no unhappy results. The citizen can call on the Board of Health for review of what he considers arbitrary action by the department. He can, of course, also go to the courts.

The relations of the board and the department with organized groups are likewise worthy of note. The board, in carrying out its chief function of writing the basic health laws and regulations for the city, necessarily consults with a wide variety of commercial, union, charitable, and professional interests. The views of all concerned are sought, chiefly by letter and in hearings before the board. The department, concerned with enforcing regulations and administering a large program of health activities, also crosses the conflicting interests of many people. It has made wide use of professional advisory committees, recognized experts in special fields, and voluntary health groups. There are several standing committees and many ad hoc committees. Representatives of the department choose members of these committees usually in consultation with the groups concerned. In contrast to the Department of Hospitals, it works with many more outside groups and is concerned with many health activities other than its own operations. Relations with the county medical societies have been carried on mainly through the attendance of the commissioner at the department's five-county coordinating council. Care is taken to inform medical, dental, and nursing societies of proposed activities before they are publicly announced, but recommendations made by these groups have not necessarily been adopted. The guiding principle has been to choose the health of the majority of New Yorkers, not the special interests of the professionals. There are also a variety of interdepartmental boards to consider subjects of mutual concern.

Today's health problems are changing, just as they have in the past century. A revolution is under way. Some of its manifestations are conspicuous, such as air and water pollution, pesticides, the ever-rising

costs of medical care, the burden of caring for the mentally retarded and the emotionally handicapped, and the problem of where to go for what when one is ill. Some problems are hard to understand and deal with, particularly those caused by the archaic organization of the total system of delivering personal health services. New approaches are being made through regionalization in water, air pollution, and for the care of cancer, heart, and stroke patients; through payment of bills for the elderly through Medicare and for others through Medicaid; through wider use of ancillary personnel; through health planning at state and community levels; through direct attacks on poverty and through changes in techniques of operational research, to name but a few. More money is now available, largely through the federal government, to support the new activities. Community-wide planning is on its way. Were more assistance through the great foundations also available, as in the past, sounder programs difficult to accomplish with public funds alone might well evolve. But it is clear that with 1966 another wave of change has begun.

#### IN RETROSPECT

What of the results of these efforts? The simplest answer is probably that in the 100 years covered, life expectancy had risen from 45 to 70 years. The death rate had fallen by two thirds. Major epidemics have disappeared. Despite the unattractiveness of much of modern living, the stench and extreme filth of even the poor areas is largely gone. Health problems have not all been solved; new ones have come and will continue to come. Today a major reevaluation in medical care is facing the city. In solving this current problem, as in solving problems of earlier years, the answers lie not only with the politicians and the health professionals but with the climate of the time.

What lessons are to be learned from the past? Seven stand out.

First, success has been achieved whenever the health affairs of the city have had strong scientific and professional leadership, and when there have been citizens, various professional groups, and political leaders sincerely interested in the common good.

Second, the social and economic climate of the times has a marked influence on what can be and is done. Health education, mental health, and family planning are examples of programs that died out and re-flowered later.

Third, the larger battles seem to have been won when efforts have centered on what can best be done at a particular time to reach a larger goal, when there is readiness to shift tactics as new techniques and new obstacles are found. Progress has seemed to come in spurts, but even then it has usually gone one step at a time. When that step is based on solid scientific evidence, the desired goal can usually be attained more readily. Closing schools and swimming pools did not control poliomyelitis, but vaccine did.

Fourth, a certain amount of patience is essential. Fluoridation of water supplies came after 10 years of continuous effort. More effective delivery of personal health services to all will take its decade or more, also.

Fifth, the importance of a sound administrative structure in city government staffed by highly-skilled professionals able to move from one health problem to another has been amply demonstrated in these past 100 years. The ability of such a structure to circumvent bureaucratic controls and political interference has also been shown, though such a process wastes a great deal of time and effort and does not always succeed.

Sixth, the strong tradition of the integrity, professional, and scientific expertise of the Board of Health and of the Department of Health and their ability to mobilize private resources, maintained over many years, has been of major importance in the protection of the health of New Yorkers.

Seventh, a strong research component is essential to good administration.

May New Yorkers be wise enough to remember these lessons in the coming days of the increasingly noisy revolution in health affairs that is taking place. And may New Yorkers salute that hard core of devoted health workers in the city service who have made possible the achievements I have briefly and inadequately recounted.